

Measure Up

Winter 2008-09

Assessment news for fourth-grade teachers



Findings From NAEP 2007

- Fourth-grade reading scores were higher in 2007 than in 1992.
- For grade 4, reading scores for White, Black, and Hispanic students were higher in 2007 than in 1992.
- Average mathematics scores increased between 2005 and 2007 in about half the states at grade 4.

Sample NAEP Item: Mathematics

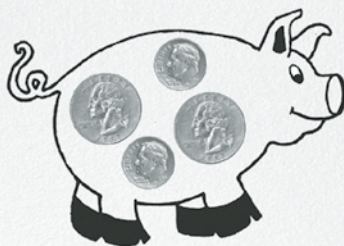
After each NAEP assessment, select questions are released. These questions can be accessed at <http://nces.ed.gov/nationsreportcard/itmrls>. This website also provides teachers with answer keys, scoring guides, sample student responses, and

national and state performance results for fourth-grade students.

The question below was taken from the 2007 mathematics assessment.

1. Tony has 2 quarters and 2 dimes. Marta has 1 quarter, 2 dimes, and 1 nickel. Which of the coins from Tony's bank would he need to give Marta so that they each have the same amount of money?

- A) One dime
- B) Two dimes
- C) One quarter
- D) One quarter and one dime



Tony's Bank



Marta's Bank

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To access the
NAEP frameworks, please
visit www.nagb.org and
select “publications.”

Sample NAEP Item: Mathematics *(continued)*

The mathematics question on page one asks students to determine the amount of money in each of the banks, compare the two quantities, and establish the difference between the two. Students then need to take the difference between the two amounts, divide it in half, and determine which coin(s) would add up to this final amount. To answer this question, fourth-grade students must use a variety of mathematical and problem-solving skills. In 2007, 57 percent of fourth-graders in public schools answered this question correctly, selecting choice (A). An incorrect answer was provided by 41 percent of students. Two percent of students did not answer the question.

The NAEP mathematics framework guides the mathematics assessment. The framework is developed by the National Assessment Governing Board and is available at www.nagb.org.

The mathematical content area for the bank/coin question is number properties and operations, and it is a moderate-complexity item. Number properties and operations items focus on students' abilities to represent numbers, order numbers, compute with numbers, make estimates appropriate to given situations, use ratios and proportional reasoning, and apply number properties and operations to solve real-world and mathematical problems. This sample question asks students to solve a story problem involving money.

Items in the moderate-complexity category involve more flexibility of thinking and choice among alternatives than do those in the low-complexity category. They require a response that goes beyond the habitual, is not specified, and ordinarily has more than a single step. The student is expected to decide what to do, using informal methods of reasoning and problem-solving strategies, and to bring together skill and knowledge from various domains.

Sample NAEP Item: Reading

In the 2007 reading assessment, fourth-graders were asked to read the short story “Dishpan Ducks” by Margaret Springer and respond to several questions. The story centers on a young girl named Rosa who is new to the country and knows very little English. She spends most of her time alone by a small creek with ducks. One day she finds the ducks

covered in an oily film, and thus unable to swim or fly. Rosa runs for help, saving the ducks, and making new friends in the process.

The question below asks students to evaluate the story, determine its importance and central focus, and compare two possible titles for the story.

Sample Grade 4 Reading Question

In the story, Rosa enjoys spending time at the creek behind her apartment building. Do you think “Rosa’s Creek” would be a better title than “Dishpan Ducks”? Use evidence from the story to compare both titles and to explain which title is better.

After deciding on the best title for the story, students are to defend their answer using evidence from the text. Students are encouraged to engage with the text on a deeper level through a process of analysis, assessment, and personal judgment.

The NAEP reading framework specifies that

the context for this question is Reading for Literary Experience. This context involves the reader in exploring themes, events, characters, settings, problems, and the language of literary works. The reader thinks about the perspective of the authors and characters and considers the language and story structure when reading for literary experience.

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Scoring Guide Excerpts

The text below is an excerpt of the guide used to score student responses.

Evidence of full comprehension

Provide an opinion about which title is better by discussing both titles or by providing multiple pieces of linked information in support of one title. Responses may suggest that neither title is better than the other so long as they provide support for the opinion. Responses may provide an alternative title and support that title with at least two pieces of linked information.

Evidence of partial or surface comprehension

Provide an opinion about which title is better by discussing one title and providing one piece of information in support of the opinion or one piece of general support. Responses may provide an alternative title that demonstrates understanding of the story and may or may not provide a piece of information as support. Or, responses provide information from the story that may support one or both of the titles without stating an opinion about which title is the better.

Evidence of little or no comprehension

Provide an opinion about which title is better, but provide no support for that opinion. Responses demonstrate no understanding of how the titles relate to the story and may contain vague personal opinions about one or both of the titles. Some responses may provide an alternative title that demonstrates no understanding of story events.



Please visit
<http://nces.ed.gov/nationsreportcard/itmrls>
 to see additional sample
 student responses.

Sample Student Responses

The text below provides sample student responses at each level on the scoring guide. Comments from the scorers are also included.

Full comprehension

"Rosa's Creek" would be a better because it takes place behind her apartment building. "Dishpan Ducks" is not a good title because the ducks weren't the main character. So I think "Rosa's Creek" is a better title than "Dishpan Ducks."

Scorer's comments: The response provides an opinion about each title with text-based support for each opinion.

Partial comprehension

"Dishpan Duck" is better than "Rosa's Creek" because the Creek is not hers.

Scorer's comments: The response provides an opinion about one title and supports the opinion using one piece of information from the story.

Little or no comprehension

I think "Rosa's Creek" would be a better title than "Dishpan Ducks." The story was about dishpan ducks.

Scorer's comments: The response provides an opinion about one title but the supporting statement contradicts the opinion and merely repeats the title of the story.

For this reading
 question, a majority
 of states had student
 responses rated as full or
 partial comprehension.

What is the Nation's Report Card™ ?

The Nation's Report Card™ informs the public about the academic achievement of elementary and secondary students in the United States. Report cards communicate the findings of the National Assessment of Educational Progress (NAEP), a continuing and nationally representative measure of achievement in various subjects over time.

For over three decades, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. By collecting and reporting information on student performance at the national, state and local levels, NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement and relevant variables is collected. The privacy of individual students and their families is protected, and the identities of participating schools are not released.

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